

**DRAFT**  
**DNCT Team**  
**Meeting Notes**  
**5/11/99**  
**9:30-4:30**

**Attendees:**

**Agenda:**

1. Evaluation of Gaming Runs
    - a. Water supply
    - b. Biology
    - c. Water Quality
  2. Model Run for Game 5
  3. Quinn/Spear and Policy Meetings this week
- 
- I. Highlights
  - II. Game 5 - Water Users - Beginning of Stage 1
    - A. George presented model runs for Game 5
      1. The way he simulated VAMP was an issue
        - a. no net loss to exporters does not show up in modeling
        - b. There is an impact to water supply from export restrictions
        - c. Should take out VAMP export constraint.
        - d. Discuss with Q/S.
        - e. George will rerun by Thursday.
      2. SWP would get little benefit from this baseline. Limited used of expanded Banks.
      3. Monthly average limit of 8,300 cfs for Banks.
- III. Gaming Evaluations
  - A. Water Supply
    1. Most important factors that affected water supply:
      - change in exports for fish protection
      - upstream purchases for fish
      - Yield from Webb project storage
      - Fish purchase of water SOD
    1. C: Need to make the pie big enough so we all get the slice we want. So far we have not made the pie big enough. No one is satisfied. Thus we should conclude that we have failed. Need to inform Q/S of this reality.
    2. R: Can not say that everyone is not happy. Need to better define our objectives and improve our tools and modeling techniques. We know

what we are trying to accomplish. Need to define our targets.

3. Q: If we haven't reached our targets, then how close have we come and what additional is needed to reach targets.
4. Q: Should we continue to go forward with the EWA?
5. R: Our evaluations yet undone will define what further we need.

A. Game 2 Evaluation for WS

1. Table for Water Supply Benefit

Parameter	Amount of Water TAF	EWA Benefit	Water Supply Benefit
Base Exports	2843		
Adjusted Exports	2847	4	
EWA Credits	156		
EWA Uses	153		
SJ purchase	30	30	
Bacon EWA	100	100	
Webb	60		60
Bacon ET	45	45	
Webb ET	15		15
<b>Net WS Benefit</b>			<b>75</b>
<b>Net EWA Benefit</b>		<b>175</b>	

Water supply benefit was 75 TAF over baseline, which were 65 above Accord for a total of 140 TAF benefit.

C: This benefit is portrayed in terms of deliveries; we should use exports.

C: This benefit is consistent with the water supply benefit of 75 TAF portrayed in State Board hearings.

C: We can borrow EWA water in San Luis in summer as they do not use it until fall.

II. Water Quality Evaluation

A. Parameters

1. Bromide - seawater intrusion

2. DOC
- B. In Game we bought water and used it to add to fall outflow to reduce bromides - in reality we may have preferred simply to have the water. There are quantity versus quality tradeoffs. We did shave off peaks in bromides.
- C. Peak DOC always occurred in Feb/Mar period from leaching ag drainage. Cutting exports in this period for EWA and exporting at other times generally benefitted water quality.
- D. In-Delta storage generally increased DOC and balanced out EWA benefits.
- E. Need to coordinate with CUWA study on Delta Wetlands.
- F. We could funnel Delta island water to CVP ag users.
- G. Water quality generally benefitted from the Accord, then more from the baseline, and then finally from the EWA.

### III. Fish Evaluation

- A. Game 2 and Services Game have the same baseline and are thus comparable.
- B. Accord and VAMP generally provided a lot of fish benefits; whereas EWA added slightly to these:
  1. EWA fills in around the Accord and VAMP to provide additional salmon and smelt benefits.
  2. EWA also reduces exports in DEC/JAN period for yearling salmon and adult smelt benefits.
  3. Uncertainty (angst) of effects of scaled up exports before and after VAMP, particularly high June exports. We considered positive changes in spring that included moving X2 downstream may make the fish less vulnerable to pumps in June than the model would indicate. We allowed high exports in June 1993 because we thought earlier actions would have move them to the west. This would be a question for assurances.
- C. **EWA crafts protection around "angst" factor, whereas prescribed standards approach of Services does not.**
- D. Fall MidWater Trawl Index for delta smelt is an indicator of the need for winter protections from exports. (Low index means population is in greater need for protection.)
- E. Spring and summer townet indices are best indicators for young smelt in spring and summer.
- F. For salmon, the presence of fall yearlings, spring, latefall and winter run subyearlings in salvage in late fall and winter are an indicator of the need to cut exports in winter.
- G. Russ's modeling of VAMP is overly robust.
- H. Issues, Questions, Conclusions - see attached charts.

## **EWA Actions to Benefit Delta Smelt**

- **100 TAF of purchased water from San Joaquin tributaries each year for release in spring to reduce entrainment and enhance X2.**
- **Export reductions immediately before and after VAMP further reduces entrainment losses of larval and juvenile smelt and enhances X2.**
- **DEC-MAR export reductions reduce salvage losses of adult smelt.**

## **EWA Actions to Benefit Salmon**

- **100 TAF of purchased water from San Joaquin tributaries each year for release in spring to enhance migration to and through the Delta. Also benefits Sacramento salmon.**
- **Export reductions immediately before and after VAMP further reduces losses of salmon.**
- **DEC/JAN export reductions reduce salvage losses and support migrations of spring run, late fall run, and winter run salmon smolts through the Delta.**
- **FEB/MAR export reductions reduce salvage losses of winter run smolts and fall run fry.**

## **EWA Key Issues for Fish**

- **Institutional guarantees that resources for EWA will be there.**
- **Balancing monitoring at the level of decision making.**
- **Money versus facilities.**
- **Reality versus assurances.**
- **Resources are needed most in wet years.**
- **Is water really there to purchase.**
- **For day 1 of Stage 1 there were serious questions on assurances.**

## EWA Key Questions for Fish

- Did we take a step in the right direction? **No.**
- Did we address many of the needs of Central Valley salmon? steelhead? delta smelt? splittail? **No.**
- Did we take the right steps toward recovery by the end of Stage 1? **Not sure. No.**
- How does the EWA compare to the prescriptive approach of the Services' alternative?
  - EWA is better given same resources because of flexibility.
  - Water is more cost effective than standards but more of a burden.
- Will EWA move us forward? **Yes. Key word is potential.**
- Will it meet everyone's' needs by year 7? **No. We do not know goals.**

## **EWA Key Conclusions for Fish**

- **Prescriptive standards are better for delta smelt.**
- **Splittail improve over baseline.**
- **Delta is small part of problem for salmon and steelhead.**
- **Wet years are a problem for fish because of expanded export capacity and higher than historical demands.**
- **We should continue with EWA because it is a great tool, but only one tool - it is not a silver bullet.**
- **There are many tough policy questions to address - we aren't magicians - policy doesn't want to hear this.**
- **Historical gaming has its limitations - we need to game in real time and make real decisions - we should start now.**
- **For a given amount of resources, EWA has a better chance of success than prescriptive standards.**
- **Need to get issues identified on table and some resolution.**
- **Need to negotiate resources for beginning and end of Stage 1.**



# **What more do we need to make EWA work**

- **More gaming and evaluation.**
- **Test alternatives more thoroughly - other ways to play game**
- **Try EWA in combination with prescriptive standards and adaptive management.**
-